



## SEQUENCE LISTING

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<150> EP 00127891.0  
<151> 2000-12-20

<160> 17

<170> PatentIn Ver. 3.3

<210> 1  
<211> 165  
<212> PRT  
<213> Homo sapiens

<400> 1  
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1 5 10 15  
  
Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
20 25 30  
  
Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
35 40 45  
  
Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu Val Trp  
50 55 60  
  
Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
65 70 75 80  
  
Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
85 90 95  
  
Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
100 105 110  
  
Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
115 120 125  
  
Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
130 135 140

Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
 145 150 155 160

Cys Arg Thr Gly Asp  
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<210> 2  
<211> 166  
<212> PRT  
<213> Homo sapiens

<400> 2  
Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
 1 5 10 15

Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
 20 25 30

Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
 35 40 45

Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu Val Trp  
 50 55 60

Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80

Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95

Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110

Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125

Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
 130 135 140

Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
 145 150 155 160

Cys Arg Thr Gly Asp Arg  
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<210> 3  
<211> 201  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic protein  
 construct

<400> 3  
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu  
 1 5 10 15  
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 20 25 30  
 Glu Gly Arg Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu  
 35 40 45  
 Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys  
 50 55 60  
 Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys  
 65 70 75 80  
 Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val  
 85 90 95  
 Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly  
 100 105 110  
 Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu  
 115 120 125  
 His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu  
 130 135 140  
 Arg Ala Leu Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala  
 145 150 155 160  
 Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu  
 165 170 175  
 Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr  
 180 185 190  
 Gly Glu Ala Cys Arg Thr Gly Asp Arg  
 195 200

<210> 4  
<211> 196  
<212> PRT  
<213> Artificial Sequence  
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 1 5 10 15  
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 20 25 30

Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu  
                  35                 40                 45

Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser  
      50                 55                 60

Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala  
  65                 70                 75                 80

Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly  
  85                 90                 95

Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val  
  100                 105                 110

Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala  
  115                 120                 125

Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala  
  130                 135                 140

Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu  
  145                 150                 155                 160

Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser  
  165                 170                 175

Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg  
  180                 185                 190

Thr Gly Asp Arg  
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<210> 5  
 <211> 201  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic protein  
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Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Gly Ala  
  20                 25                 30

Ala His Tyr Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu  
  35                 40                 45

Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys  
  50                 55                 60

Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys  
  65                 70                 75                 80

Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val  
           85                     90                     95  
 Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly  
           100                 105                 110  
 Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu  
           115                 120                 125  
 His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu  
           130                 135                 140  
 Arg Ala Leu Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala  
           145                 150                 155                 160  
 Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu  
           165                 170                 175  
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           180                 185                 190  
 Gly Glu Ala Cys Arg Thr Gly Asp Arg  
           195                 200

<210> 6  
 <211> 629  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic nucleotide  
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<220>  
 <221> CDS  
 <222> (14)...(616)

<400> 6  
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       1             5                         10  
  
 ctc ctg tcc ctg tcg ctc cct ctg ggc ctc cca gtc ctg ggc gcc      97  
 Leu Leu Ser Leu Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala  
       15             20                     25  
  
 ccc ccc cga atc gag ggc cgc gcc cca cgc ctc atc tgt gac agc      145  
 Pro Pro Arg Ile Glu Gly Arg Ala Pro Pro Arg Leu Ile Cys Asp Ser  
       30             35                     40  
  
 cga gtc ctg gag agg tac ctc ttg gag gcc aag gag gcc gag aat atc      193  
 Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile  
       45             50                     55                 60

acg acg ggc tgt gct gaa cac tgc agc ttg aat gag aat atc act gtc	241
Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val	
65	70
	75
cca gac acc aaa gtt aat ttc tat gcc tgg aag agg atg gag gtc ggg	289
Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly	
80	85
	90
cag cag gcc gta gaa gtc tgg cag ggc ctg gcc ctg tcg gaa gct	337
Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu Ser Glu Ala	
95	100
	105
gtc ctg cgg ggc cag gcc ctg ttg gtc aac tct tcc cag ccg tgg gag	385
Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu	
110	115
	120
ccc ctg cag ctg cat gtg gat aaa gcc gtc agt ggc ctt cgc agc ctc	433
Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu	
125	130
	135
acc act ctg ctt cgg gct ctg gga gcc cag aag gaa gcc atc tcc cct	481
Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu Ala Ile Ser Pro	
145	150
	155
cca gat gcg gcc tca gct gct cca ctc cga aca atc act gct gac act	529
Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr	
160	165
	170
ttc cgc aaa ctc ttc cga gtc tac tcc aat ttc ctc cgg gga aag ctg	577
Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu	
175	180
	185
aag ctg tac aca ggg gag gcc tgc agg aca ggg gac aga tgaccaggtc	626
Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp Arg	
190	195
	200
gac	629

<210> 7  
<211> 614  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
nucleotide construct

<220>  
<221> CDS  
<222> (14)..(601)

<400> 7  
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1 5 10  
49

ctc ctg tcc ctg ctg tcg ctc cct ctg ggc ctc cca gtc ctg ggc gcc	97
Leu Leu Ser Leu Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala	
15 20 25	
 ccc ccc gcc cca cca cgc ctc atc tgt gac agc cga gtc ctg gag agg	145
Pro Pro Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg	
30 35 40	
 tac ctc ttg gag gcc aag gag gcc gag aat atc acg acg ggc tgt gct	193
Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala	
45 50 55 60	
 gaa cac tgc agc ttg aat gag aat atc act gtc cca gac acc aaa gtt	241
Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val	
65 70 75	
 aat ttc tat gcc tgg aag agg atg gag gtc ggg cag cag gcc gta gaa	289
Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu	
80 85 90	
 gtc tgg cag ggc ctg gcc ctg ctg tgg gaa gct gtc ctg cgg ggc cag	337
Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln	
95 100 105	
 gcc ctg ttg gtc aac tct tcc cag ccg tgg gag ccc ctg cag ctg cat	385
Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His	
110 115 120	
 gtg gat aaa gcc gtc agt ggc ctt cgc agc ctc acc act ctg ctt cgg	433
Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg	
125 130 135 140	
 gct ctg gga gcc cag aag gaa gcc atc tcc cct cca gat gcg gcc tca	481
Ala Leu Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser	
145 150 155	
 gct gct cca ctc cga aca atc act gct gac act ttc cgc aaa ctc ttc	529
Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe	
160 165 170	
 cga gtc tac tcc aat ttc ctc cgg gga aag ctg aag ctg tac aca ggg	577
Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly	
175 180 185	
 gag gcc tgc agg aca ggg gac aga tgaccaggc gac	614
Glu Ala Cys Arg Thr Gly Asp Arg	
190 195	

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<210> 8
<211> 629
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: Synthetic nucleotide  
construct

<220>  
 <221> CDS  
 <222> (14)...(616)  
  
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     Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu  
     1                 5                 10  
  
 ctc ctg tcc ctg ctg tcg ctc cct ctg ggc ctc cca gtc ctg ggc gcc 97  
   Leu Leu Ser Leu Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala  
   15                 20                 25  
  
 ccc ccc ggc gcc gcc cac tac gcc cca cca cgc ctc atc tgt gac agc 145  
   Pro Pro Gly Ala Ala His Tyr Ala Pro Pro Arg Leu Ile Cys Asp Ser  
   30                 35                 40  
  
 cga gtc ctg gag agg tac ctc ttg gag gcc aag gag gcc gag aat atc 193  
   Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile  
   45                 50                 55                 60  
  
 acg acg ggc tgt gct gaa cac tgc agc ttg aat gag aat atc act gtc 241  
   Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val  
   65                 70                 75  
  
 cca gac acc aaa gtt aat ttc tat gcc tgg aag agg atg gag gtc ggg 289  
   Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly  
   80                 85                 90  
  
 cag cag gcc gta gaa gtc tgg cag ggc ctg gcc ctg ctg tcg gaa gct 337  
   Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala  
   95                 100                 105  
  
 gtc ctg cgg ggc cag gcc ctg ttg gtc aac tct tcc cag ccg tgg gag 385  
   Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu  
   110                 115                 120  
  
 ccc ctg cag ctg cat gtg gat aaa gcc gtc agt ggc ctt cgc agc ctc 433  
   Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu  
   125                 130                 135                 140  
  
 acc act ctg ctt cgg gct ctg gga gcc cag aag gaa gcc atc tcc cct 481  
   Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu Ala Ile Ser Pro  
   145                 150                 155  
  
 cca gat gcg gcc tca gct gct cca ctc cga aca atc act gct gac act 529  
   Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr  
   160                 165                 170  
  
 ttc cgc aaa ctc ttc cga gtc tac tcc aat ttc ctc cgg gga aag ctg 577  
   Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu  
   175                 180                 185  
  
 aag ctg tac aca ggg gag gcc tgc agg aca ggg gac aga tgaccaggtc 626  
   Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp Arg  
   190                 195                 200  
  
 gac 629

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<210> 9
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

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<210> 10
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

<400> 10
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  1          5

<210> 11
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide

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  1          5

<210> 12
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
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<210> 13
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      primer

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<210> 14
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide

<400> 14
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<210> 15
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide

<400> 15
cgcggccctc gattcggggg gggg                                24

<210> 16
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide

<400> 16
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<210> 17
<211> 24
<212> DNA
<213> Artificial Sequence

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<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 17  
cgttagtgggc ggccgcgggg gggg

24